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*Policy Research Paper*

# Overview of Truck-Only Toll Lanes in the United States

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# Overview of Truck-Only Toll Lanes in the United States

*Consumer demand is growing in the United States and the trucking industry plays a big part in providing goods and supplies to retailers. The increase in imported goods to America and the popularity of just-in-time delivery to retailers have caused freight movement to increase from coast to coast. The Federal Highway Administration (FHWA) predicts that truck freight in the United States will increase from 10.4 billion tons in 1998 to 18.1 billion tons by 2020.[1] With more than 2.7 million large trucks on American roads, congestion is a problem that some believe truck-only toll (TOT) lanes can solve.*

## TOT Overview

Truck-only toll lanes separate trucks from other vehicles to aid traffic flow and enhance safety. In their 2002 Reason Foundation report, T*oll Truckways: A New Path Toward Safer and More Efficient Freight Transportation*, Robert W. Poole, Jr. and Peter Samuel examined truck-only toll lanes in depth. In a subsequent paper, Poole and Samuel proposed TOT lane feasibility guidelines, which recommend TOT lanes where average daily traffic counts total 40,000 vehicles in each direction and heavy trucks account for 20 percent.[2] The Center for Urban Transportation Research at the University of South Florida also examined TOT lanes and found that three main factors determine TOT lane feasibility: safety, operations, and roadway geometrics. Average annual daily traffic, percent of trucks in the traffic mix, level of service, and lane and shoulder widths are other important elements to review when determining if TOT lanes would benefit an area.

TOT lanes can be variously configured: with lanes in the median of existing roadways (a barrier may separate the lanes from regular traffic lanes); elevated above existing roadways; or new-construction highway projects. Some departments of transportation have even suggested turning high-occupancy vehicle (HOV) lanes into TOT lanes.

*TOT lanes separate large trucks from lighter vehicles on the highway. . . . The benefits of the TOT facility include more efficient, safer and improved access and connectivity for truckers to other routes.*

Financing mechanisms to build TOT lanes are also varied. Of course, the cost of tolls should eventually cover the cost to construct the lanes, but in order for construction to begin, funding must first come from other sources. Bonds, public revenues, and private equity are some of the funding options for TOT lanes.

## Federal Programs

### *Value Pricing Pilot Program*

The term "value pricing," also known as peak-period pricing and congestion pricing, refers to direct, non-constant charges for road use that vary according to location, time of day, severity of congestion, vehicle occupancy, or type of facility. TOT lanes may have different toll rates at different times of day and may even be free to trucks at certain times. FHWA believes that by shifting some trips to off-peak periods or to routes away from congested facilities, value pricing charges will promote economic efficiency, both generally and within the commercial freight sector. Value pricing charges also achieve congestion reduction, improved air quality, energy conservation, and transit productivity goals.[3]


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TOT lanes are eligible for funding under the federal Value Pricing Pilot Program (VPP). The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) renewed the VPP program run by the FHWA. The VPP encourages the implementation and evaluation of value-pricing pilot projects to manage congestion on highways through tolling and other pricing mechanisms.

Standard value pricing concepts such as converting HOV to High-Occupancy Toll (HOT) lanes are not included in the federal program, but innovative tolling, such as TOT lanes on the interstate, are included. The VPP program allows the use of tolls on the Interstate Highway System. This is an exception to Title 23 United States Code Section 129, which prohibits tolls on the interstate. Only two states were selected to receive funding for truck-only toll facilities in the VPP program: Georgia and Texas.

### *DOT Congestion Initiative*

The VPP program is an important component of the U.S. Department of Transportation's National Strategy to Reduce Congestion on America's Transportation Network (DOT Congestion Initiative) announced on May 16, 2006. The DOT laid out a six-point plan to relieve urban congestion.

1. Relieve urban congestion through Urban Partnership Agreements.
2. Unleash private sector investment resources (public private partnerships).
3. Reduce border congestion.
4. Establish a "Corridors of the Future" competition.
5. Target major freight bottlenecks and expand freight policy outreach.
6. Increase aviation capacity.

This new initiative focuses on reducing congestion, and TOT lanes fit well into three areas: as part of relieving urban congestion, as a "Corridor of the Future," and as part of the plan to address major freight bottlenecks.

### *Other Initiatives*

The U.S. Department of Transportation has also developed a draft "Framework for a National Freight Policy." The framework is meant to bring together public and private stakeholders to address freight needs. One objective of the framework includes "adding physical capacity to the freight transportation system in places where investment makes economic sense," which seems to support states examining adding new capacity in the form of TOT lanes.

The American Road & Transportation Builders Association (ARTBA) has a new transportation vision called the "Critical Commerce Corridors (3C)" that focuses exclusively on "building a new generation of intermodal facilities aimed at vastly improving freight movement and the nation's emergency response capabilities." David Bauer, ARTBA's Senior Vice President of Government Relations, said, "I believe truck-only lanes are definitely a part of the 3C proposal. Whether these lanes are tolled or financed with grant funds, they are both consistent with the 3C goals."[4] The ARTBA Board of Directors approved the 3C program in September 2006 and recommended that it be considered by the federal government as a new initiative for the future of surface transportation in America.

## Positive & Negative Aspects of TOT Lanes

To many, safety is the primary reason for designating TOT lanes. In the United States in 2005, 5,200 people died in crashes involving large trucks. Passenger vehicles are no match for large trucks: out of the 5,200 who died in large truck crashes, only 803 were large truck occupants.[5] TOT lanes separate large trucks from lighter vehicles on the highway in at least two ways: the dedicated truck lane is physically separated from other lanes or is converted from a former HOV lane and is designated by striping. Supporters expect that by keeping trucks out of passenger vehicle flow, TOT lanes will lower the accident fatality rate.

In the September/October 2005 issue of *Public Roads,* David J. Forkenbrock and Jim March explain other positive aspects of encouraging TOT lanes:

1. Trucks would operate more efficiently due to the lower traffic volumes in TOT lanes.

2. Travel time would be reduced (for both trucks and passenger vehicles) due to the added capacity and decrease in congestion.

3. Quality of traveling experience would improve for

passenger vehicles – smaller vehicles would not get "boxed" in by trucks in front, behind or alongside them.

4. Speeds would improve, since slower moving trucks would be in a separate lane.

Another benefit of TOT lanes is the potential for a reduction in truck emissions, since they will avoid regular highway congestion and will be able to travel uninterrupted. They will also economize fuel if the lanes allow truckers to maintain constant speeds.

The disadvantages of TOT lanes are primarily due to the costs of TOT lane construction and tolls. Estimates for TOT lanes start at $2.5 million per lane-mile.[6] Most DOTs do not have enough funding to build exclusive truck-only lanes, though public-private partnerships (PPPs) are examining TOT lanes and may offer a financing solution.

Who should shoulder toll costs is another issue. Darrin Roth of the American Trucking Association (ATA) says: "Separating cars and trucks, for the trucking industry, would be an improvement. The issue becomes how do you pay for it."[7] Truckers believe that since the general public would benefit, they should not be the only ones paying tolls. Or, if truckers are to alone pay the toll, the cost may be passed on to consumers in higher prices.

## Current Tolled and Non-Tolled Truck Lanes in America

In the United States and along our borders, there are a few examples of tolled, dedicated truck bridges. One example is the international World Trade Bridge between Laredo, Texas and Nuevo Laredo, Mexico. In 2005, an international bridge on the Canadian border added truck-only lanes: the Queenston, Ontario to Lewison, New York toll bridge over the Niagara River. The Detroit River International Crossing Project is examining a truck-only tunnel between the province of Ontario and the state of Michigan.

An example of a non-toll dedicated truck lane is the South Boston Bypass Road in Massachusetts. The two-lane undivided roadway has no shoulders and is restricted to commercial vehicles only – including taxis, jitneys, limos, and automobiles with commercial plates. The bypass reduces demand on I-93 through downtown Boston. The Port of New Orleans built the Clarence Henry Truckway as a way to keep trucks out of adjacent neighborhoods and public streets; it is a non-tolled roadway owned by the port and used predominately by trucks, though it is also accessible to the public.

*National initiatives that encourage TOT lanes include FHWA's Value Pricing Program, the U.S. Department of Transportation's Congestion Initiative, and the Framework for a National Freight Policy.*

## States Examining TOT Lanes

Below are examples of states that are actively considering tolled truck-only lanes that could possibly come to fruition in the near future.

### *Georgia*

The state that has most intensively examined truck-only toll lanes is Georgia. The Georgia Department of Transportation (GDOT) is currently conducting a feasibility study to examine the need for TOT lanes throughout the state. The study will identify where the lanes may be feasible in terms of overall transportation system planning, lane usage (truck volumes on the roadway), available funding, community impact and land use considerations, and engineering considerations.[8] The final feasibility report will be available in October 2007 and will recommend steps to implementing truck-only lanes where feasible.

Not only are TOT lanes being examined on a statewide level, but TOT lanes are also being studied in Atlanta, where transportation leaders have a strong interest in TOT lanes due to the region's growing population and congestion. In fact, the Atlanta area will grow by more than 2.3 million people by 2030, and the Atlanta Regional Commission projects that commercial vehicle travel will increase by an additional 50 percent over current levels by 2030.[9]

The Georgia State Road and Tollway Authority has examined TOT lanes and determined that TOT lanes will improve truck mobility and improve the performance of the regional network of limited access highways and local roads. In July 2005, the "Atlanta TOT Facilities Study"

found that under any of the three scenarios examined:

1. Total vehicle hours traveled are reduced with a negligible charge in vehicle miles traveled.

2. Trucks traveling through the region can save a significant amount of time.

3. Congestion in general purpose lanes is significantly improved.

4. Respectable amounts of revenue can be generated to cover operating and maintenance costs.

The challenges to implementing TOT lanes in Atlanta include: fee structure, actual placement of TOT lanes, and public perception.

In May 2006, the I-285 Northwest TOT Team proposed a public-private partnership to construct TOT lanes in the northwest quadrant of I-285 in Atlanta. Under Georgia's Public Private Initiatives (PPI) program, the team will provide all services to fully plan, permit, finance, design and implement the project. Since the announcement, GDOT received five letters of intent to submit, and in October 2006 four teams presented proposals to construct the project. The proposals are still under evaluation.

### *Texas*

In December 2006, the Texas Department of Transportation (TxDOT) released the "Port to Port Feasibility Study Report," which recommended a TOT facility from the Port of Laredo to the Port of Corpus Christi. The study focused on the feasibility and cost of constructing and maintaining an exclusive truck-only facility, the need for which is increasing in this region due to the growth in trade. According to the study, more than three million NAFTA truck shipments will pass through Laredo (imports and exports) in 2015. The number of shipments will increase to 12.6 million by 2045.

Traffic is also increasing due to trade in goods from Asia. These shipments typically come into California ports, but due to congestion and labor issues, importers are now looking at alternatives. One route that has become more attractive begins with Asian importers unloading goods at the Mexican Port of Lazaro Cardenas, where trade shippers then transfer the goods to a Kansas City Southern Railway train heading for Laredo. Once in Laredo, truckers pick up the goods and travel via highway to the Port of Corpus Christi to continue their journey to consumers.

The benefits of the TOT facility include more efficient, safer and improved access and connectivity for truckers to other routes. An added bonus for truckers will be the proposed 80 mile per hour speed limit. Currently, truckers must take several different state and U.S highways through many small towns to get from Laredo to Corpus Christi, with speed limits ranging from 30 to 70 mph.

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### *Florida*

The 2025 Florida Transportation Plan urges innovative ways to ease traffic congestion in a state that projects population growth of 40 percent between 2004 and 2025. The volume of freight moving to, from and within the state is projected to increase 78 percent from 2001-2025. The Florida Department of Transportation is proposing a "Truck- Only Lane" as part of the I-4/ Selmon Expressway Connector in Tampa.[10] The connector is an elevated limited access connection of general purpose and truck-only lanes. The truck-only lane would serve traffic to and from the Port of Tampa and would get large trucks out of historic Ybor City. The truck-only lanes will be about one mile long with the toll to be yet determined. The total cost for the project will be over $500 million, including both truck-only and general purpose lanes. The project is 60 percent designed as of March 2007 and construction letting is scheduled to start in 2009/2010.

### *California*

Various Southern California transportation agencies are reviewing TOT lanes in the Los Angeles area. In its 1997 Regional Transportation Plan, the Southern California Association of Governments (SCAG) recommended TOT lanes on I-710, SR-60, I-15, and I-5. SR-60, a major east-west corridor from downtown Los Angeles to the Coachella Valley, was examined in a 2001 feasibility study. Even though there is support for TOT lanes on SR-60, the study suggested that less than 50 percent of trucks would use the TOT lanes daily without more access points.[11] More access points means more dollars spent on construction, thus raising potential tolls to pay for the construction. At this time, the SR 60 project is being further evaluated by a multi-county transportation commission.

The major route between the ports of Los Angeles and Long Beach and downtown Los Angeles is I-710. Ninety-five percent of truck traffic on this corridor is port-related and is expected to triple by 2020. The I-710 corridor will be a difficult area for new construction since the corridor is already built out and a portion of the current right-of-way runs along the Los Angeles River; therefore, elevated lanes are proposed. The I-710 Major Corridor Study suggests that stakeholders like the idea of separating trucks and passenger vehicles, but are concerned about elevating the lanes.[12] In an area that is prone to earthquakes, this is a concern that will need to be addressed. Unfortunately, the corridor also runs through areas high in minority populations, which would result in environmental justice issues if new right-of-way were needed. The study will continue to examine all alternatives and the challenges associated with each, but it still could be many years before a decision is made on whether or not TOT lanes will be built.

### *Virginia*

The Virginia Department of Transportation (VDOT) examined TOT lanes on I-81--one of the top eight truck routes in America--but recently decided to forgo pursuing the lanes partly due to a negative response from the trucking industry. Truckers, mostly concerned with the proposed cost of 20 cents a mile to travel on the TOT facility, organized a letter-writing campaign to shut down the proposal to build two truck-only lanes in each direction on I-81. The Virginia Commonwealth Transportation Board rejected the TOT lanes after a Tier 1 Draft Environmental Impact Statement showed that the TOT lanes would provide too much truck capacity and not enough car capacity. ATA President and CEO Bill Graves issued the following statement: "We're pleased that VDOT has changed its direction and moved away from tolled truck lanes. Toll lanes create two classes of drivers. Those who can afford to pay a toll and those who cannot. This causes traffic diversions to other, often less safe roads. Therefore, it was not something we could support."[13]

*TOT lanes are being examined in Georgia, Texas, Florida and California.*

## Conclusion

The U.S. Department of Transportation supports TOT lanes through various federal programs. With federal support, states will be more willing to examine TOT lanes to reduce congestion, improve the flow of freight and increase safety. In some urban areas, TOT lanes seem to make sense as truckers on long-haul trips do not need to get off the highway. In California, TOT lane proposals

on I-710 are a different scenario. Truckers that travel this urban freeway are often only on short trips from port to warehouse, and would not benefit from time savings by traveling on a TOT facility unless more frequent access points are added.

An important aspect of building TOT lanes is the cost to construct them. The cost is often prohibitive to public entities, but private industry is taking a look at this concept. In Texas, TOT lanes have been proposed for the Trans-Texas Corridor. This tolled, multi-use transportation corridor will be built with private funds and managed by private industry for a profit. Other states will need to examine the benefits of TOT lanes and determine if they have the ability to designate TOT lanes on existing roadways or the funding to construct new TOT lanes with public or private funds. The trucking industry may not be supportive of paying tolls on highways at this time, but the benefits of increased safety and productivity will likely speak for themselves once TOT lanes are implemented throughout the country.

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